

**City of Greensboro Planning Department
Zoning Staff Report
April 10, 2006 Public Hearing**

The information provided in this staff report has been included for the purpose of reviewing proposed zoning changes. Since the zoning process does not require a site plan, there may be additional requirements placed on the property through the Technical Review Committee process to address subdivision and development regulations.

Item: E
Location: North of the terminus of Spring Oak Drive, northwest of Country Woods Lane and west of Woods End Lane

Applicant: Wolfe Homes
Owner: J.A.D.&W. LLC; Paul B. & Dale M. Talley

From: County RS-40 and City RS-40
To: City CD-RS-12

- Conditions:**
- 1) All uses in the RS-12 zoning district, except: Agricultural Uses; Educational and Institutional Uses; Land Clearing and Inert Debris Landfills, Minor; and Wireless Telecommunication Towers, except for satellite dishes affixed to single family homes.
 - 2) The maximum number of single family homes shall be 81.
 - 3) No dumpsters shall be allowed, except during the construction phase for construction debris.

SITE INFORMATION	
Maximum Developable Units	81
Net Density	N/A
Existing Land Use	Undeveloped
Acreage	20.309
Physical Characteristics	<i>Topography:</i> Rolling <i>Vegetation:</i> Wooded <i>Other:</i> N/A
Overlay Districts	N/A
Historic District/Resources	N/A
Generalized Future Land Use	Low Residential
Other	N/A

SURROUNDING ZONING AND LAND USE		
Location	Land Use	Zoning
North	Rural Residential	Co. RS-40 Co. AG
South	Single Family	RS-12
East	Single Family	Co. RS-40
West	Rural Residential	Co. RS-40

ZONING HISTORY		
Case #	Year	Request Summary
2495	1996	This property was annexed as part of a larger area with an effective date of June 30, 1996. It has been zoned RS-40 since that time.

DIFFERENCES BETWEEN RS-40 (EXISTING) AND CD-RS-12 (PROPOSED) ZONING DISTRICTS
RS-40: Primarily intended to accommodate single family detached dwellings on large lots and is intended solely for properties having one or more of the following characteristics: (a) Lies within the 60 DNL noise contour; (b) Lies in a public water supply watershed and where an outfall to provide public sewer service is not available; or (c) Lies in a portion of a watershed critical area to which an outfall to provide sewer service has been made available pursuant to an agreement, approved by the City and by another governmental jurisdiction, designed to limit development density to approximately that obtainable prior to sewer service.
CD-RS-12: Primarily intended to accommodate moderate density single family detached dwellings in developments where public water and sewer service is required. The overall gross density will typically be 3.0 units per acre or less. See Conditions for use limitations and additional restrictions.

TRANSPORTATION	
Street Classification	Clarkson Road – Local Street, Spring Oak Drive – Local Street, Fleming Road – Major Thoroughfare.
Site Access	The property proposes to access via two street stubs Clarkson Road and Spring Oak Drive.
Traffic Counts	Fleming Road ADT = 13,880.
Trip Generation	N/A.
Sidewalks	Requirement per Development Ordinance. A 6' sidewalk w/ a 4' grass strip is required along both sides of thoroughfares. A 5' sidewalk w/ a 3' grass strip is required along all other streets.
Transit	No.
Traffic Impact Study	Not required per TIS Ordinance. However, the Developer did opt to do a technical memo. Please see the Additional Information section of this staff report.
Street Connectivity	Please see the additional information section of this staff report for the findings of the City's Street Connectivity Policy.
Other	N/A.

ENVIRONMENTAL REVIEW	
Water Supply Watershed	Yes, site drains to Greensboro Watershed
Floodplains	N/A
Streams	Two perennial streams on site. Perennial streams in Greensboro watershed require 100' buffer for high density option (each side of the stream). The buffers are to be measured from top of stream bank. No built upon area is allowed in the entire buffer. See City of Greensboro Ordinance (30-7-1.8) for buffer restrictions.
Other	Maximum percentage of built upon area per watershed density is 70%. If high density development is proposed all the built upon area must drain and get treated by a State approved device (pond or similar).

LANDSCAPING REQUIREMENTS	
Location	Required Planting Yard Type and Rate
<i>North</i>	N/A
<i>South</i>	N/A
<i>East</i>	N/A
<i>West</i>	N/A

CONNECTIONS 2025 COMPREHENSIVE PLAN POLICIES

Connections 2025 Written Policies:

Growth at the Fringe Goal: Provide a development framework for the fringe that guides sound, sustainable patterns of land use, limits sprawl, protects rural character, evidences sound stewardship of the environment, and provides for efficient provision of public services and facilities as the City expands. Development will increase density and mix land uses at a pedestrian scale with sidewalks, bikeways, and where possible, public transit.

Housing and Neighborhoods Goal: Meet the needs of present and future Greensboro citizens for a choice of decent, affordable housing in stable, livable neighborhoods that offer security, quality of life, and the necessary array of services and facilities.

POLICY 6A.2: Promote mixed-income neighborhoods.

POLICY 6C: Promote the diversification of new housing stock to meet the needs of all citizens for suitable, affordable housing.

POLICY 9A.5: Continue to link City-initiated annexations and approvals of annexation petitions for water/sewer extension policies regarding designated growth areas.

Connections 2025 Map Policies:

The area requested for rezoning lies within the following map classifications:

Low Residential (3-5 d.u./acre): This category includes the City's predominantly single-family neighborhoods as well as other compatible housing types that can be accommodated within this density range. Although there are some existing residential areas in the City developed on lots greater than 1/3 acre, future residential developments and "conventional" subdivisions should generally maintain a gross density of no less than three dwellings per acre, except where environmental constraints (e.g., the Watershed Critical Area) prevent such densities from being achieved. Compact developments that include clustered, small lots with substantial retained open space are encouraged.

CONFORMITY WITH OTHER PLANS

The following aspects of relevant plans may be applicable in this case:

City Plans: N/A

Other Plans: N/A

STAFF COMMENTS

Planning: The single family lots south of the subject property along Country Woods Lane were initially zoned Conditional Use – Residential 120S when the property was annexed on July 1, 1985. The condition limited the density to one residence per acre within the 65 Ldn noise cone. That zoning was converted to RS-12 upon city-wide remapping to implement the UDO on July 1, 1992.

The proposed CD-RS-12 is compatible with the zoning along County Woods Lane and is consistent with the Low Residential designation on the Generalized Future Land Use Map of Connections 2025.

This request is consistent with the Growth at the Fringe Goal and the Housing and Neighborhoods Goal as described above. Furthermore, this proposal meets the Comprehensive policies of promoting mixed-income neighborhoods and promoting diversification of new housing stock.

GDOT: No additional comments.

Water Resources: Possibility of wetlands. Any wetland disturbance and or stream crossing disturbance must be permitted by the State and the Corps of Engineers. All the approvals must be obtained prior to any disturbance.

Channels that carry public water require a Drainage Maintenance and Utility Easement (DMUE). The width depends on the runoff that the channels carry.

STAFF RECOMMENDATION

Based on all the information contained in this report, the Planning Department recommends approval.

ADDITIONAL INFORMATION

March 27, 2006

Mr. David Schenck
Wolfe Homes
200-J Pomona Drive
Greensboro, NC 27407
336-299-2969 (office)
336-209-7665 (cell)
336-299-2949 (fax)

RE: Traffic Assessment for proposed residential development; Greensboro, NC –
(Project Number: 06-047)

Dear Mr. Schenck:

At your request, our firm John Davenport Engineering, Inc. has performed a traffic assessment for the proposed residential development to be located off Country Woods Lane in Greensboro, NC (Figure 1). The site plan indicates that this project proposes to have 81 single family homes (Figure 2). This memorandum summarizes the assessment of the existing traffic conditions, as well as the projected traffic impacts associated with this project. The analysis year for the project was assumed to be 2009.

Existing Roadway Conditions

Field surveys and research were conducted by JDE staff to determine the existing conditions of the transportation facilities within the study area. The table below contains the results of this effort.

Street Inventory			
Facility Name	Cross Section	Pavement Width	24-hour Traffic Volume
Fleming Road	2-lane/5-lane	Varies	13,880
Country Woods Lane	2-lane	Approximately 24'	565

Note that all traffic counts were taken according to GDOT standards (weekdays Tuesday, Wednesday, or Thursday; and while school was in session). A peak hour traffic count was also taken on 3/15/06 at the intersection of Fleming Road and Country Woods Lane.

These volumes can be found in Figure 3 in the appendix.

Traffic Generation

The Institute of Transportation Engineers (ITE) Trip Generation Software was utilized to project the trips for this project. As stated earlier, the project includes 81 single-family homes. The appendix contains the full trip generation report.

Table 1- ITE Trip Generation					
Wolfe Homes March 23, 2006					
	24 Hour Two-Way	AM Peak		PM Peak	
<u>Land Use and Size</u>	Volume	Enter	Exit	Enter	Exit
81 single family homes	857	17	50	56	33



Trip Distribution

Trips for this proposed development were distributed based on the existing traffic patterns collected and engineering judgment. It was assumed that the new trips would continue the same pattern as the existing residential use along Country Woods Lane. Figure 4 in the appendix contains the proposed trip distribution.

Capacity Analysis

The Transportation Research Board's Highway Capacity Manual (HCM) utilizes a term "level of service" to measure how traffic operates at intersections and on roadway segments. There are currently six levels of service ranging from A to F. Level of Service "A" represents the best conditions and Level of Service "F" represents the worst. Synchro Traffic Modeling software was used to determine the level of service for the study intersections. This software is based on the methodology outlined in the Highway Capacity Manual 2000 (HCM). The intersection of **Country Woods Lane and Fleming Road** was analyzed under the following scenarios; 2006 existing, 2009 Future no-build and 2009 Future Build.

The existing traffic volumes were grown at a rate of 3.0% per year (typical urban growth rate) to project the 2009 background volumes. The projected traffic volumes can be found in Figures 5, 6, and 7. Note for unsignalized intersection analysis, the level of service noted is for the worst approach of the intersection. This is typically the left turn movement for the side street approach, due to the number of opposing movements. All worksheet reports from the analyses can be found in the Appendix. The following is a summary of the level of service analysis:

Level of Service Table						
	AM Peak			PM Peak		
Intersection	2006 Base Conditions	2009 Future No-Build	2009 Future Build	2006 Base Conditions	2009 Future No-Build	2009 Future Build
Country Woods @ Fleming	C (16.0) EBL	C (17.6) EBL	D (26.4) EBL	C (17.1) EBL	C (19.4) EBL	C (21.6) EBL

The typical goal for level of service when designing a new intersection is LOS D and a traffic signal is not considered until the intersection delay is well into the LOS F range. Intersections functioning in the LOS E and F range are fairly common for urban areas in North Carolina. However, based on our analysis, the study intersection is expected to function at a LOS D or better during the peak periods. Note this delay could increase significantly if the exiting traffic patterns shift with more traffic turning left out of Country Woods Lane.

Spot Speed Study

A mechanical spot speed study was conducted on County Wood Lane to determine if there were any serious problems. The study revealed that the 85th percentile speed was 36.0 MPH, which is very close to the speed limit of 35 MPH (statutory).

Conclusion and Recommendations

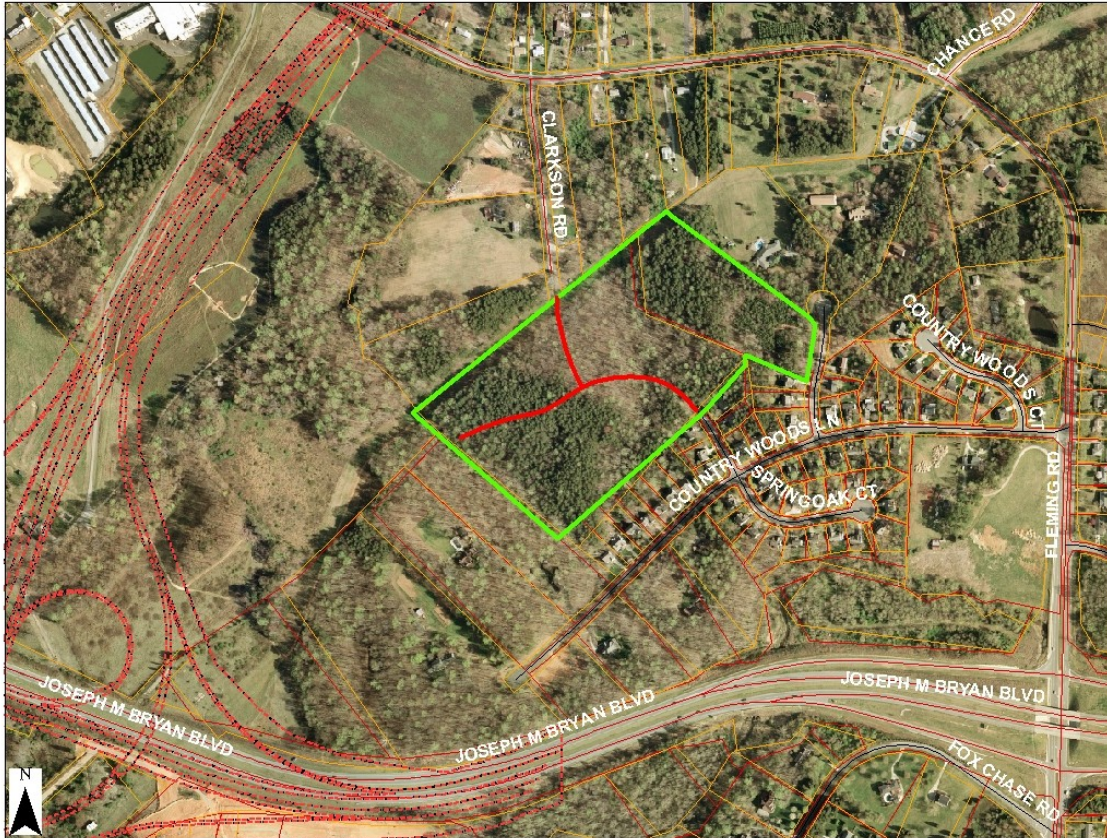
Our firm has conducted an analysis of your project and its projected effects on the surrounding area. The intersection of Fleming Road and Country Woods Lane was the main focus of the study. The analysis indicates that this intersection should function acceptably with the construction of this development. As stated before, this is based on the majority of the traffic making right turns, which is currently the pattern of the existing traffic. Left turn traffic will experience longer delay if the left turn volume rises significantly. No roadway improvements are necessary at this location. Additionally, there is ample capacity on Country Woods Lane to handle the additional traffic from this development. There are no outstanding safety issues on the roadway.

If you have questions, or need additional information please feel free to contact me at (336) 744-1636.

Sincerely,

A handwritten signature in cursive script that reads "John M. Davenport Jr.".

John Davenport, Jr., PE
John Davenport Engineering, Inc.



Street Connection Policy:

In accordance with Section 30-6, 13.3 (C) of the Greensboro Development Ordinance, street extensions that extend from existing neighborhood through a proposed development site into or through another existing neighborhood shall be evaluated and established based on the following criteria:

1. Emergency Response Times:
How much a street connection may decrease emergency response times or enhance emergency vehicle access.
(Fire Department to evaluate, Robert Cudd)

Street connectivity is vital for the response of emergency vehicles. Providing alternative means of access into neighbor hoods can reduce response times but also allows secondary responding vehicles i.e. ambulances, police & additional fire trucks access to the neighborhoods once fire hose is on the street.

2. Excessive Block Lengths:
Evaluate current neighborhood block lengths and determine if a street connection is needed.
(Planning Department to evaluate, Steve Galanti)

Section 30-6-13.4 (Block Length) of the Development Ordinance requires the following:

The block length shall not exceed one thousand, five hundred (1,500) feet:
A1. The block along the north side of Country Woods Lane (between Fleming Road and its terminus) is currently approximately 2,732 feet. With the connection of the through-street the block would be divided into two segments, one at approximately 1,260 feet and one at approximately 1,472 feet. With Spring Oak as a through street, as depicted on the map submitted for review, the subdivision design would comply with the block length requirements of the Ordinance. **Therefore, the connection is recommended.**

A2. The block along the south side of Fleming Road (between Country Woods Lane and Inman Road) is currently approximately 5,763 feet. With the connection of the through-street the block would be divided into two segments, one at approximately 2,152 feet and one at approximately 3,611 feet. Although the connection depicted on the map submitted for review does not comply fully with the requirements of the Ordinance, the situation would be closer to compliance (and meeting the intent of the provision) than not having the connection. **Therefore, the connection is recommended.**

B. maximum block perimeter of six thousand (6,000) feet:
The current block perimeter measures approximately 18,609 feet. With the street connection the current block would be divided into two blocks, one with a perimeter of approximately 7,445 feet and the other with approximately 18,583 feet. Although the connection would not create two blocks that comply fully with the requirements of the Ordinance, the situation would be closer to compliance (and meeting the intent of the provision) than not having the connection. (NOTE: The blocks would be further reduced upon completion of the urban loop and extension of the western stub street. The future street network is severely restricted due to the location of Bryan Boulevard and the Urban Loop.)
Therefore, the connection is recommended.

C. Cul-de-sac Maximum Length: The maximum distance from an intersecting through street to the end of a cul-de-sac shall be eight hundred (800) feet. Without the street connections the result would be the creation of two cul-de-sacs. The "Clarkson Road" cul-de-sac would be approximately 970 feet and the "Spring Oaks" cul-de-sac would exceed 800 feet depending on the subdivision design. The connection would eliminate both cul-de-sacs. **Therefore, the connection is recommended.**

3. Traffic Congestion:
Existing and/or anticipated street patterns warrant a street connection(s) in order to reduce traffic congestion.
(Greensboro Department of Transportation to evaluate, Carrie Reeves)

The proposed street extension/connection is proposed to be local residential street, and is not anticipated to have any impact on traffic congestion level within the area.

4. Pedestrian:
Existing street and sidewalk patterns warrant a street connection(s) and or sidewalk connection(s) to enhance pedestrian and bicyclist activities.
(Greensboro Department of Transportation to evaluate, Peggy Holland)

The proposed street connection will provide pedestrian and bicycle connection between existing and proposed residential streets.

5. Coordinated Street Plan:
A street connection fits into adopted street plans (thoroughfare plan, collector street plan, and local street plan)
(Greensboro Department of Transportation to evaluate, Carrie Reeves)

There are no adopted street plans for this area.

6. Extraneous Traffic:
Whether or not a proposed street connection(s) would encourage traffic volumes with origins and destinations outside the existing neighborhood or encourage truck traffic to pass through the neighborhood.
(Greensboro Department of Transportation to evaluate, Carrie Reeves)

The proposed street connection is not anticipated to encourage extraneous traffic to utilize this local residential street network.

7. Impacts to Natural Areas:
Whether or not a proposed street connection(s) would adversely affect streams, lakes/ponds, and whether or not there are topographical barriers or unique natural areas.
(Greensboro Department of Transportation, Water Resources Department, and Parks and Recreation Department to evaluate, Virginia Spillman, Mike Simpson)

Water Resources: This site has 2 perennial streams that would potentially be affected by the street layout as highlighted on the map. Stream #1 is a perennial stream that runs north to south very close to the west property line. Stream #2 is a stream that runs near the east property line. Both streams will have to be crossed at least once if the connectivity takes place. Perennial streams in this

watersupply watershed require a 100' buffer (for high density option) on each side measured from top of bank. No built upon area is allowed in the entire buffer. Utility crossings and street crossings are allowed as long as all the certifications are obtained from the State and the Corps of Engineers.

Also, there could potentially be wetlands associated with the streams. A required street crossing perpendicular to the stream is allowed if appropriate permits are obtained. As with any perennial stream crossing, it would have to be made as close to 90 degrees as possible and all appropriate permits/approvals would have to be obtained from the state and the corps. Any wetlands disturbance also requires permits from the state and corps.

Parks and Recreation: No unique natural areas or topographical barrier.

8. Impacts to Public Facilities:

Whether or not a proposed street connection(s) would adversely affect other public facilities such as parks, bike trails, nature trails, and natural areas. (Greensboro Department of Transportation and Parks and Recreation Department to evaluate public facilities, Mike Simpson, Peggy Holland)

Parks and Recreation: No public facilities such as parks, trails, or natural areas at this location.

9. Public Service Delivery:

Whether or not a proposed street connection would enhance delivery of public services. (Greensboro Department of Transportation and Environmental Services to evaluate Carrie Reeves)

GDOT: The proposed street connections will improve the routing and delivery of goods and public services such as solid waste collection, mail/package deliveries, school bus routing, and water/sewer line connections.

Environmental Services: It continues to be the Department's preference to require the connection of all streets to allow ease of service delivery. During the event in which connectivity is not physically possible, it is the preference of the Department to allow adequately sized turnarounds. Such turnarounds should be constructed to the minimum City street design standards.

This recommendation is based on the Department's ability to provide solid waste services. For the solid waste operations, staff is instructed to avoid backing the solid waste vehicles. Five independent solid waste collection services are provided to resident/businesses on a weekly basis. Three of the five services are managed by a single operator, no safety spotter is available to guide the vehicle or assist maneuvering the vehicle safely with its inherent blind spots. The minimum length of the solid waste vehicles is 33 feet. Due to these constraints,

operators are instructed to avoid backing and use available constructed turnarounds and paved areas. Supervisory staff notifies residents of obstacles placed within the turnaround locations that prevent the delivery of solid waste services.

Conclusively, solid waste service delivery is enhanced with the City's position to encourage street connectivity.

Public Involvement Procedure:

When, during the rezoning stage, the initial analysis by the City of Greensboro staff indicates a proposed street connection is warranted (based on a review of criteria 1-9) the Zoning Commission meeting will serve as the public hearing for public involvement and information gathering.

When, during the plan review stage, the initial analysis by City of Greensboro staff indicated a proposed street connection is warranted (based on a review of criteria 1-9) and prior to City of Greensboro staff making a recommendation to the Technical Review Committee, an information gathering meeting will be held with adjacent property owners to seek additional information related to criteria 1-9.

(Greensboro Department of Transportation to coordinate public involvement)

Should a proposed rezoning or an appeal of a TRC plat denial be made, this form (and attached map showing all proposed street connection locations and public involvement summary) will be provided to the Planning Board and City Council for their use and consideration in the appeals process.

Staff Recommendation:

The attached graphic in this street connectivity evaluation document is only to illustrate a conceptual connection (or one alternative) of how Clarkson Road and Spring Oak Drive could be connected to each other. It is for illustrative purposes only. The goal of this evaluation is simply to illustrate whether or not some type of connection should be made between Clarkson Road and Spring Oak Drive.

The proposed connection would meet block length and perimeter, and cul-de sac ordinance requirements. There are no impacts to natural areas and permits can be obtained to cross streams. The City of Greensboro will be more able to provide better/efficient services and the connection will provide for other modes of travel such as bikers and walkers. Therefore, City Staff recommends some type of connection between Clarkson Road and Spring Oak Drive.

Date: April 5, 2006

Name: Carrie S. Reeves, PE

Turn Around Evaluation: In the event a connection between Clarkson Road and Spring Oak Drive is not approved or required of the developer.

Street: Spring Oak Drive and Clarkson Road Connection
Limits: From Spring Oak Drive to Clarkson Road
Length: Will vary depending on proposed roadway alignment

1. How important is a permanent turn around at the end of Spring Oak Drive or Clarkson Road in order for your Department to provide services in a safe and efficient manner? (Please Circle)
 - a. **Critical**
 - b. Very Important
 - c. Somewhat Important
 - d. Not Important at all
2. Does your Department request that a permanent turn around be installed at the end of Spring Oak Drive or Clarkson Road? (Please Circle)
 - a. **Yes** (If yes please list reasons why your department requests a turn around, please include any departmental standards and policies)
 - b. No

Environmental Services: If no through street is developed a permanent structure will be required. Solid waste does not have an alternative to backing at least 75 feet or more. Most services are provided with a single operated vehicle. Blind spots are associated with these vehicles.

Fire Department: Fire code requires any street longer than 150' to have a permanent turn around. The Greensboro Fire Department requires a minimum Cul-De-Sac diameter of 65', or a T/L – shaped turn around w/ the minimum branch length of 50'.

3. If your Department requests a permanent turn around, what type of turn-a-round do you request? (Please circle desired type of turn around)
 - a. **Cul-De-Sac (COG Std. 503)**
 - b. **Branch "L" Permanent (COG Std. 502)**
 - c. **"T"-Type Permanent (COG Std. 502)**
 - d. Temporary (COG Std. 502)
 - e. Other

Environmental Services: A cul-de-sac is the preference for the operations of Environmental Services' vehicles. However, a "t" could be managed if adequate space and visibility is provided.

Fire Department: Fire has no preference other than one of the above highlighted permanent turn arounds be installed at the end of streets.

4. Are you aware of any constraints that would prohibit the construction of a turnaround at this location?
- a. No
 - b. Yes (Please list constraints below)